

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308463

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P308463
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L82765-RDP-CP250-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1662.0 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

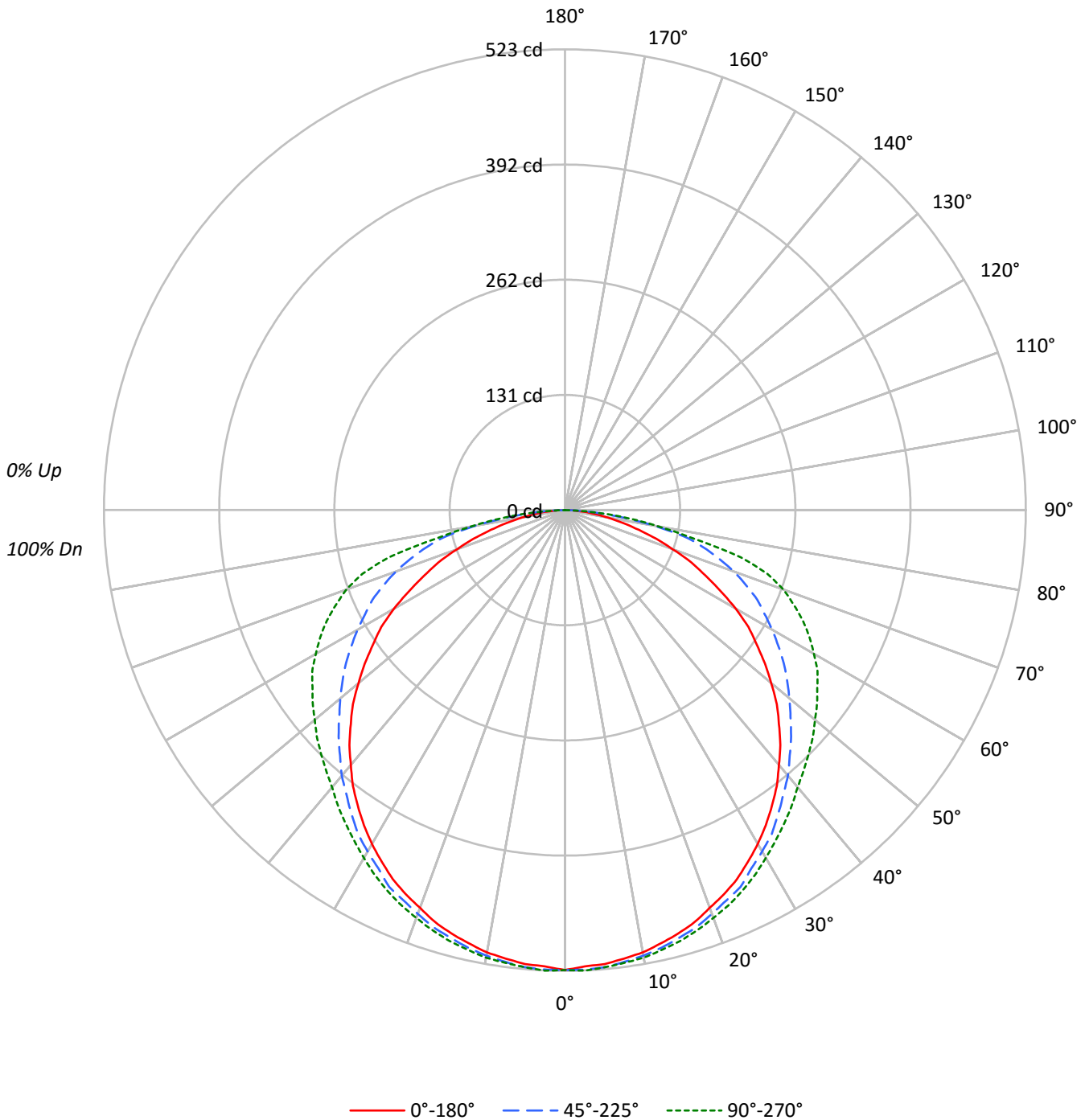
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1405	1405	1405
5°	1397	1407	1407
10°	1393	1403	1410
15°	1386	1400	1410
20°	1376	1397	1411
25°	1372	1401	1416
30°	1360	1391	1417
35°	1346	1386	1426
40°	1327	1383	1443
45°	1308	1382	1489
50°	1280	1392	1551
55°	1245	1422	1641
60°	1204	1461	1757
65°	1121	1534	1899
70°	1029	1607	2078
75°	902	1691	2148
80°	776	1610	1686
85°	679	1170	1284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.4	3.0
10°-20°	141.8	8.5
20°-30°	216.3	13.0
30°-40°	264.1	15.9
40°-50°	282.4	17.0
50°-60°	272.6	16.4
60°-70°	234.7	14.1
70°-80°	158.8	9.6
80°-90°	41.9	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	407.5	24.5
0°-40°	671.6	40.4
0°-60°	1226.7	73.8
0°-90°	1662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	522	522	522	522	522	
5°	517	518	521	521	521	49
15°	498	499	502	505	506	140
25°	462	465	472	474	477	213
35°	410	413	422	430	434	256
45°	344	350	363	382	391	265
55°	265	274	303	334	350	238
65°	176	193	241	279	298	175
75°	87	115	163	196	207	93
85°	22	31	38	39	42	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	522.1	522.1	522.1	522.1	522.1
2.5°	518.4	519.6	522.1	522.1	523.3
5°	517.2	518.4	520.8	520.8	520.8
7.5°	513.5	514.7	517.2	518.4	518.4
10°	509.8	511.1	513.5	514.7	515.9
12.5°	503.7	504.9	508.6	511.1	511.1
15°	497.6	498.8	502.5	504.9	506.2
17.5°	490.3	492.7	496.4	498.8	500.1
20°	480.5	482.9	487.8	491.5	492.7
22.5°	471.9	474.4	479.3	482.9	485.4
25°	462.2	464.6	471.9	474.4	476.8
27.5°	449.9	452.4	458.5	463.4	467.0
30°	437.7	440.1	447.5	453.6	456.0
32.5°	424.3	427.9	436.5	441.4	445.0
35°	409.6	413.2	421.8	430.4	434.0
37.5°	394.9	398.6	407.1	418.1	423.0
40°	377.8	382.7	393.7	408.4	410.8
42.5°	361.9	368.0	377.8	394.9	401.0
45°	343.6	349.7	363.1	381.5	391.2
47.5°	326.4	332.6	347.2	369.2	381.5
50°	305.7	314.2	332.6	358.2	370.5
52.5°	286.1	293.4	317.9	346.0	360.7
55°	265.3	273.9	303.2	333.8	349.7
57.5°	247.0	254.3	287.3	321.6	339.9
60°	223.7	233.5	271.4	308.1	326.4
62.5°	199.3	214.0	255.5	293.4	313.0
65°	176.1	193.2	240.9	278.8	298.3
67.5°	155.3	173.6	222.5	262.9	281.2
70°	130.8	154.1	204.2	243.3	264.1
72.5°	108.8	134.5	183.4	222.5	240.9
75°	86.8	114.9	162.6	195.6	206.6
77.5°	67.2	94.1	139.4	149.2	150.4
80°	50.1	74.6	103.9	105.1	108.8
82.5°	34.2	52.6	67.2	73.4	74.6
85°	22.0	30.6	37.9	39.1	41.6
87.5°	9.8	11.0	13.4	12.2	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)